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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
097588,396	06/06/2000	Richard F. Buckley	19546-020-(E-3915)	19546-020-(E-3915) 9558	
30623	7590 04/08/2003				
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY			EXAMI	EXAMINER	
	CIAL CENTER	TRAN, KHOA H			
BOSTON, MA 02111			ART UNIT	PAPER NUMBER	
			3634	19	
			DATE MAILED: 04/08/2003	1 1	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary Continue Continue		Application No.	Applicant(s)			
Note Tran 3634 Single	·	09/588,396	BUCKLEY, RICHARD F.			
- The MAILING DATE of this communication appears on the cover sheet with the correspondence address — Period for Repty A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Eatherstood of them pay be availated under the provisions of 3 CFR 1.138(a). In no event, however, may a reply be timely filled 1 the period for reply specified shows the trasers when the 15 CFR 1.138(a). In no event, however, may a reply be timely filled 1 the period for reply specified shows, the maximum statutory period will apply and will expire SIX (MONTHS from the mailing date of the communication. 1 If the period for reply specified shows, the maximum statutory period will apply and will expire SIX (MONTHS from the mailing date of the communication. 1 If the period for reply specified shows, the maximum statutory period will apply and will expire SIX (MONTHS from the mailing date of the communication. 2 If the period for reply specified shows, the maximum statutory period will apply and will be considered fromly. 3 If the period from 3 the statutory and the statutory reply within the statutory entire the application is become ABANDONED (30 U.S.C. § 133). 3 If the specified shows the statutory and the statutory of the	Office Action Summary	Examiner	Art Unit			
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THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provision of 3° CPR 1.13(d). In no event, however, may a riphy be timely find after SIX (8) MONTHS from the mailing date of this communication. If the period crimply specified date in the provision of the communication of the provision of th	·	ears on the cover sheet with the c	orrespondence address			
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Drawings

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on January 16, 2003 have been approved. New format sheets of drawings are now required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sibley ('230). Sibley ('230) discloses a silicon carbide semiconductor wafer carrier (70) including processes that require the use of high temperatures, see the Abstract and column 1, lines 8-11, column 2, lines 8-9, and column 3, lines 24-25. The semiconductor wafer boat (70) of Sibley comprising a plurality semiconductor wafers, (only one showed, see Figure 5), receiving in a plurality of slots position between first and second ends of the boat. The plurality of slots (75) on the wafer boat are located on the first (left side) and second (right side) upper supporting guides and on the lower arcuate grooved portion (74), see column 5, lines 48-50, wherein the bottom of the semiconductor wafer is in contact and supported by the slot on the lower arcuate grooved portion, and the at least one window (32) positions substantially in a small distance in from the distal end of the boat. The process of making the wafer boat is

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through a process of involving high heating through a suitable temperature. See columns 7 and 8. With respect to claims 3 and 13, to one of ordinary skill in the art, it would have been obvious that the silicon carbide would recrystalized itself to a normal state when place in a cooler environment after being removed from the high temperature environment. With respect to the dimensioning of the wafer and the angle of the wafer relatives to the boat, and the distance of the windows locate from the distal ends of the boat, it would have been an obvious matter of engineering design choice as determined through routine experimentation and optimization for one of ordinary skill in the art to routinely dimension the wafer to have a diameter of about 300mm and the thickness of 5mm, and dimension the radius angle from the center to the periphery edge of the wafer relatives to the upper supporting guides to be in ranges of 10-80 degrees, and dimension the distance in from the distal end to the window to be a minimum of about 10mm for a particular application, producing no new and unexpected results. With respect to claim 7, it would have been obvious to one of ordinary skill in the art as a matter of design choice to make duplication in part of the number of slots on the wafer boat in order to accompany the desire number of semiconductor wafers for a particular application thus producing no new matters. Note the applicant's drawings do not show the boat must support 25 wafers. Further, it is not the main inventive concept of the applicant to have a wafer boat design to hold only 25 wafers, see page 12, lines 19-20. With respect to the range of temperatures approximately between 1000 to 1400 degrees of Celsius, it should be noted, the patentability of the reciting structure, itself, that is to be determined and not how the product is to be constructed or the processes

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of the product arrive, Sibley ('230) discloses the process of making the wafer boat through a high suitable temperature, i.e., 2000 degrees Celsius, see column 8, lines 31-32. Sibley ('230) does not specifically disclose the temperature is to be in ranges of between 1000 to 1400 degrees of Celsius. However, it is well established by case law that it is not inventive to discover the optimum or workable ranges where the general conditions are known in the art. Further, it is expected, as a part of the level of skill would routinely experiment to discover the optimum or workable ranges for a particular use. Accordingly, it would have been an obvious matter of engineering design choice, as determined through routine experimentation and optimization, for one of ordinary skill in the art to dimension the process temperature to be in ranges between 1000 to 1400 degrees Celsius, thus producing no new and unexpected results.

Response to Amendment

Applicant's arguments filed January 16, 2003 have been fully considered but they are not persuasive.

With respect to applicant's arguments that Sibley's windows or openings fail to increases radiation view factors and decreases radiation blocking of the wafers in the boat. The examiner respectfully disagrees. In this regard, it should be noted that the level of increase is not specified nor is the structure against which a comparison is made for determining whether or not an "increase" is present. Nevertheless, the inclusion of windows will inherently result in an increase of radiation view factors and a decrease of radiation blocking as compared to a structure with no windows.

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Moreover, as previously stated, patentability determination of a claim is based on the patentability of the recited structure and not why such structure has been provided. The claims set forth the presence of windows and the prior art teaches the provision of windows. There is no requirement that the windows be provided for the exact same reason specified by the applicant and applicant has otherwise failed to show that the prior art does not inherently accomplish the recited function. It is applicant's position that a windowless wafer boat would have higher radiation view factors and less radiation blocking that the windowed wafer boat of Sibley ('230)?

It appears that applicant is relying on some extraneous source to impart to the claims limitations otherwise not present. However, such reliance is improper and ineffective to distinguish from the prior art.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoa Tran whose telephone number is (703) 306-3437. The examiner can normally be reached on Monday through Thursday from 8:30 A.M. to 7:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola, can be reached on (703) 308-2686. The fax phone number for this Group is (703) 305-3597 or (703) 305-3598.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

If the applicant is submitted by facsimile transmission, applicant is hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P. 502.02). In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P 512). The following is an example of the format the certification might take:

I hereby certify that this c	correspondence is being fac	simile transmitted to the
Patent and Trademark Office	Fax No	On
		(Date)

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Type or printe	ed name of p	erson sig	ning this o	certificate
(Signature)				

Furthermore, please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Khoa Tran

April 05, 2003

DANIEL P. STODOLA SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 3600